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ALBERTA POPULATION GROWTH

THIRD QUARTER, 1988

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ALBERTA POPULATION GROWTH
THIRD QUARTER, 1988

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PREFACE

This publication presents up-to-date information on quarterly population estimates and population growth components (births, deaths and migration) for the Province of Alberta. These statistics are derived using administrative data files obtained from several government agencies.

Data are also computer-accessible via ASIST (Alberta Statistical Information System) matrices #6128, 6130, 6140 and 6141. Enquiries concerning the publication or requests for additional copies or previous quarterly reports should be directed to:

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INTRODUCTION

This publication presents estimates of population and growth components (births, deaths and migration) for Alberta for the third quarter of 1988. Statistics on interprovincial migration between Alberta and other provinces are also included. These detailed statistics are provided in the first four tables. Table 5 contains the revised population growth components by census year. Preliminary data for this table were presented in the second quarter report in Table 5. Table 6 provides population by single year of age for June 1, 1987 and 1988.

The following section analyzes current trends in Alberta population. These figures are included to illustrate trends in: (1) major population growth components, (2) gross flows of interprovincial migration and (3) population exchange between Alberta and other provinces. In order to illustrate longer term trends Figures 1 and 2 have been revised to include historical data for 1981- 1988. In addition, Figure 1 has been changed from a bar chart to a line chart.

The appendix contains a brief description of the methodology and information sources used in calculating these estimates and a glossary of demographic terms.

REVIEW OF THE DATA

During the third quarter of 1988, Alberta experienced its first net gain in interprovincial migration since the first quarter of 1986. The number of people relocating to Alberta from other parts of Canada was over 1,000 more than the number of Albertans moving to other provinces. As a result, Alberta had the highest quarterly net migration from international and interprovincial sources since the second quarter of 1982.

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For the first three quarters of 1988, net migration has been positive following six quarters of losses. This is the first time since 1981 that Alberta has had three consecutive quarters of gains.

More specifically:

Quarterly Growth

- Alberta's population increased by 10,310 in the third quarter - the highest level of growth since the second quarter of 1982. The comparable figure for the second quarter of 1988 was 9,430.

- Higher growth was due mainly to a larger gain in net migration (3,040) in the third quarter compared to 1,950 in the second quarter (Table 1, and Figure 1).

- Interprovincial migration was positive in the third quarter, the first gain since the first quarter of 1986. During the third quarter, 22,750 people moved to Alberta while 21,700 Albertans relocated to other provinces, resulting in a net gain of 1,050 (Table 2, and Figure 2).

- British Columbia continued to provide the highest number of in-migrants to Alberta (6,170 or 27.1%), and was also the main destination for Alberta's outmigrants (9,180 or 42.3%).

  Net international migration, which was 2,740 in the second quarter, declined to 1,990. However, this is still a higher level than any other third quarter in recent years.

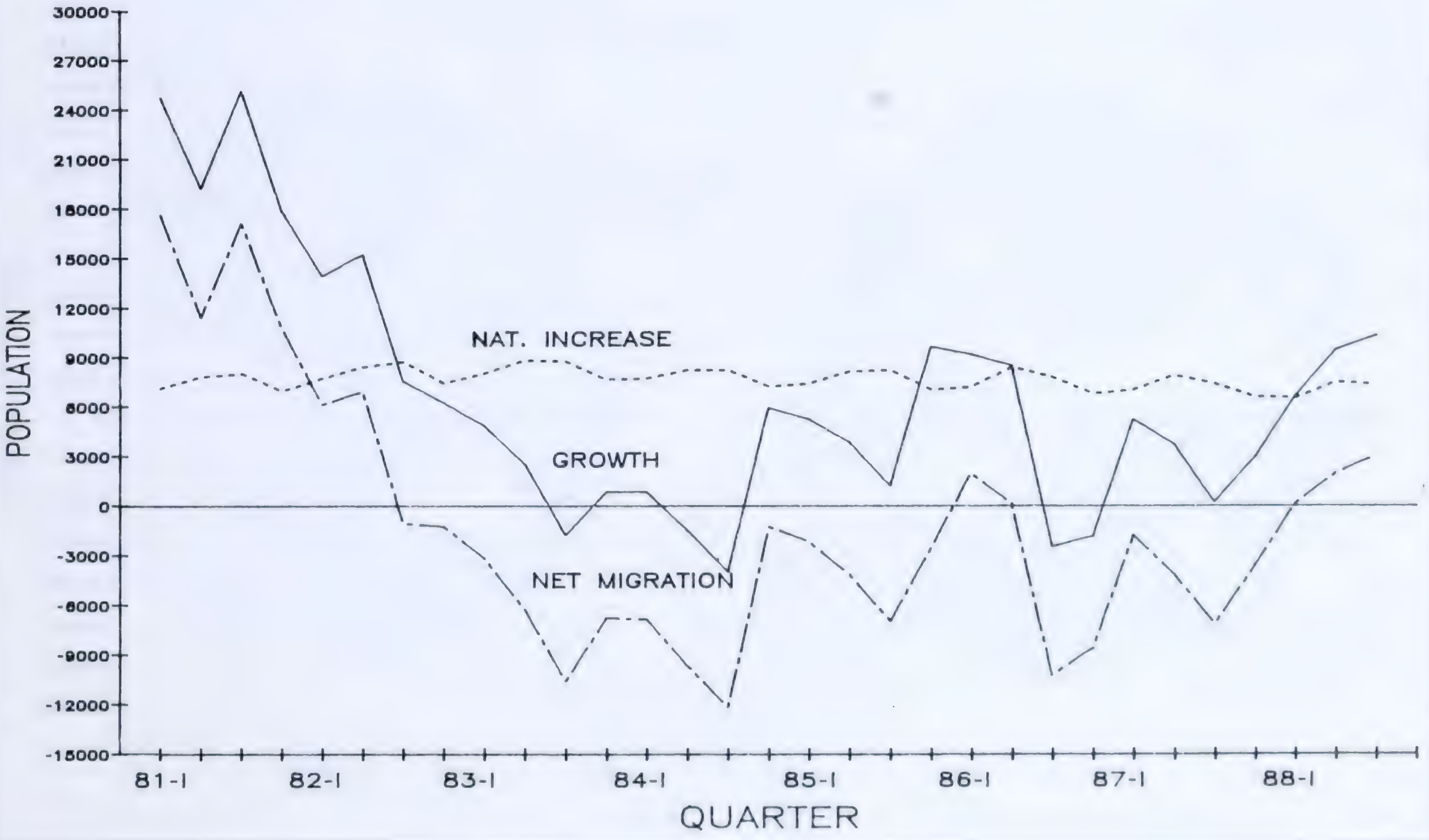
Annual Growth

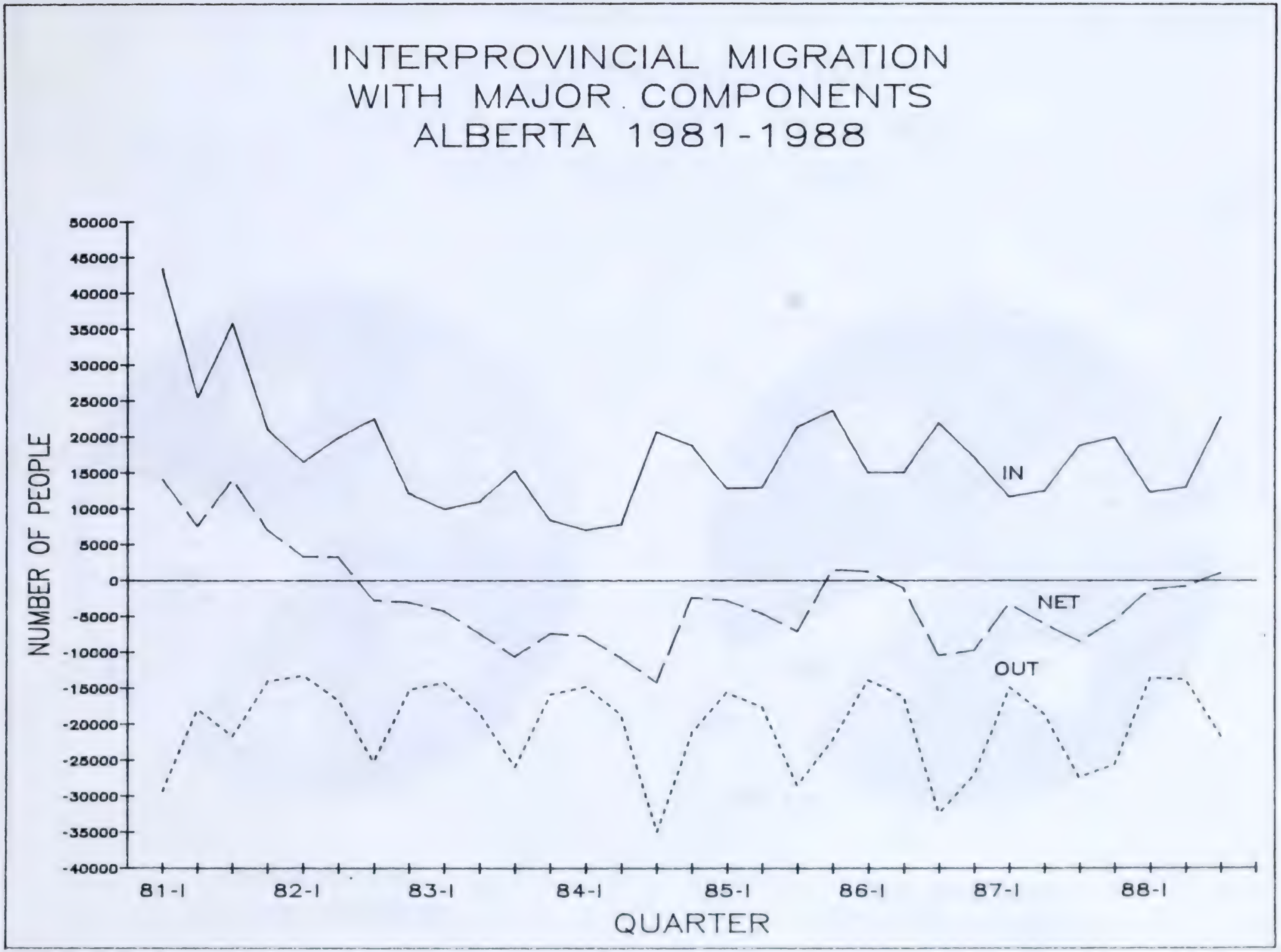
- For the year ending October 1, 1988, Alberta's population increased by 29,280 or 1.2%, about four times the growth recorded in the previous year, reaching 2.41 million on October 1, 1988.

- Alberta experienced a considerable reduction in losses from interprovincial migration. For the year ending October 1, 1988, Alberta experienced a net outflow of 6,530 compared to 27,610 recorded in the previous year. British Columbia continued to provide the most in-migrants and was the main destination for Alberta's out-migrants.

- Between October 1, 1987 and October 1, 1988, net international migration was 8,020, up from 5,830 in the previous year.

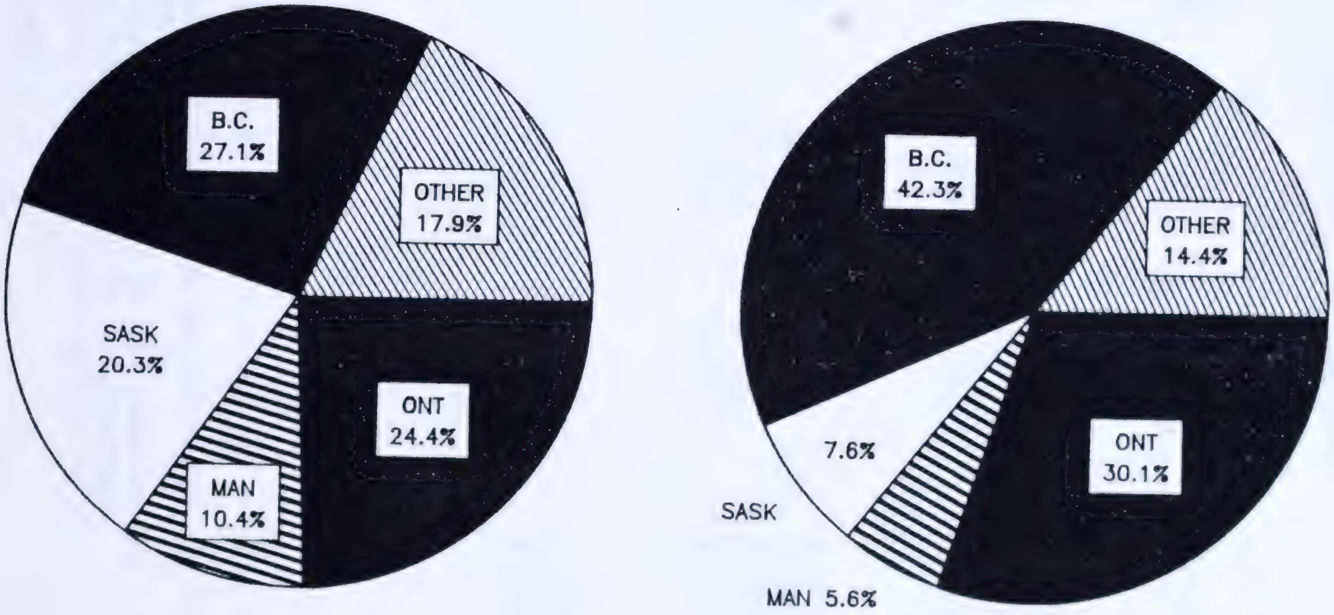
POPULATION GROWTH
WITH MAJOR COMPONENTS
ALBERTA 1981-1988





INTERPROVINCIAL MIGRATION
WITH MAJOR COMPONENTS
ALBERTA 1981-1988

POPULATION EXCHANGE ALBERTA AND OTHER PROVINCES THIRD QUARTER 1988



IN-MIGRATION
(22,750 PERSONS)

OUT-MIGRATION
(21,700 PERSONS)

TABLE 1

POPULATION GROWTH BY MAJOR COMPONENT ALBERTA, 1981 TO 1988

Quarter	Natural Increase	Net Migration	Growth	Population
1986				
I	7,170	1,950	9,120	2,368,200
II	8,360	80	8,440	2,376,600
III	7,760	-10,270	-2,510	2,374,100
IV	6,740	-8,610	-1,870	2,372,200
TOTAL	30,030	-16,850	13,180	2,372,200
1987				
I	7,020	-1,820	5,200	2,377,400
II	7,860	-4,180	3,680	2,381,100
III	7,360	-7,170	190	2,381,300
IV	6,550	-3,620	2,930	2,384,200
TOTAL	28,790	-16,790	12,000	2,384,200
1988				
I	6,490	120	6,610	2,390,800
IIr	7,480	1,950	9,430	2,400,200
IIIp	7,270	3,040	10,310	2,410,600

Notes: Reference date for population is the first day of the subsequent quarter.
Total population is rounded to the nearest 100.
Data may not add to totals due to rounding.
Data can be retrieved via ASIST matrix 6128.
r: revised
p: preliminary

TABLE 2

MIGRATION BY COMPONENT
ALBERTA, 1986 TO 1988

	International			Interprovincial		
Quarter	Immigration	Emigration	Net	In Migration	Out Migration	Net
1986						
I	2,200	1,440	760	15,040	13,850	1,190
II	2,510	1,340	1,170	15,030	16,120	-1,090
III	2,440	2,240	200	21,940	32,410	-10,470
IV	2,400	1,240	1,160	17,200	26,970	-9,770
TOTAL	9,550	6,260	3,290	69,210	89,350	-20,140
1987						
I	2,360	910	1,450	11,650	14,920	-3,270
II	3,000	1,130	1,870	12,520	18,570	-6,050
III	3,320	1,970	1,350	18,820	27,340	-8,520
IV	3,140	1,210	1,930	20,010	25,560	-5,550
TOTAL	11,820	5,220	6,600	63,000	86,390	-23,390
1988						
I	2,450	1,090	1,360	12,300	13,540	-1,240
IIr	3,900	1,160	2,740	13,000	13,790	-790
IIIp	3,790	1,800	1,990	22,750	21,700	1,050

Notes: Data may not add to totals due to rounding.
Data can be retrieved via ASIST matrices 6128 and 6130.
r: revised
p: preliminary

TABLE 3

POPULATION EXCHANGE WITH OTHER PROVINCES
ALBERTA, 1987 TO 1988

Quarter	Migration	NFLD	PEI	NS	NB	QUE	ONT	MAN	SASK	BC	TERR	TOTAL
1987												
I	To Alta.	300	20	360	200	250	2830	980	2070	4320	310	11650
	From Alta.	150	30	380	180	600	5580	850	1540	5220	400	14920
	Net Exchange	150	-10	-20	20	-350	-2750	130	530	-900	-90	-3270
II	To Alta.	340	110	260	250	420	2710	1060	2470	4600	300	12520
	From Alta.	280	90	500	310	680	6290	1080	1950	6960	440	18570
	Net Exchange	60	20	-240	-60	-260	-3580	-20	520	-2360	-140	-6050
III	To Alta.	310	160	630	480	930	4500	1790	3570	5860	600	18820
	From Alta.	390	140	950	610	1090	9160	1710	2150	10610	540	27340
	Net Exchange	-80	20	-320	-130	-160	-4660	80	1420	-4750	60	-8520
IV	To Alta.	300	70	710	510	850	5020	1580	3810	6440	730	20010
	From Alta.	440	80	810	430	790	7720	1560	2440	10720	570	25560
	Net Exchange	-140	-10	-100	80	60	-2700	20	1370	-4280	160	-5550
TOTAL	To Alta.	1250	360	1960	1440	2450	15060	5410	11920	21220	1940	63000
	From Alta.	1260	340	2640	1530	3160	28750	5200	8080	33510	1950	86390
	Net Exchange	-10	20	-680	-90	-710	-13690	210	3840	-12290	-10	-23390

See notes at end of table.

TABLE 3 (concluded)

POPULATION EXCHANGE WITH OTHER PROVINCES
ALBERTA, 1987 TO 1988

Quarter	Migration	NFLD	PEI	NS	NB	QUE	ONT	MAN	SASK	BC	TERR	TOTAL
1988												
I	To Alta.	200	10	250	150	350	3240	790	2800	4270	270	12300
	From Alta.	210	90	280	140	350	3730	750	1370	6340	280	13540
	Net Exchange	-10	-80	-30	10	0	-490	40	1430	-2070	-10	-1240
IIr	To Alta.	160	60	280	230	580	3180	1090	2660	4490	270	13000
	From Alta.	220	80	320	260	460	3810	670	1300	6280	390	13790
	Net Exchange	-60	-20	-40	-30	120	-630	420	1360	-1790	-120	-790
IIIp	To Alta.	560	160	790	650	1190	5540	2360	4610	6170	710	22740
	From Alta.	400	160	820	530	790	6530	1220	1650	9180	420	21690
	Net Exchange	160	0	-30	120	400	-990	1140	2960	-3010	290	1050

Data may not add to totals due to rounding.
Data can be retrieved via ASIST matrix 6130.
r: revised
p: preliminary

TABLE 4

NATURAL INCREASE BY COMPONENT
ALBERTA, 1986 TO 1988

Quarter	Births	Deaths	Natural Increase
1986			
I	10,660	3,490	7,170
II	11,760	3,400	8,360
III	11,040	3,280	7,760
IV	10,210	3,470	6,740
TOTAL	43,670	13,640	30,030
1987			
I	10,310	3,290	7,020
II	11,240	3,380	7,860
III	10,660	3,300	7,360
IV	9,950	3,400	6,550
TOTAL	42,160	13,370	28,790
1988			
I	10,170	3,680	6,490
IIr	10,870	3,390	7,480
IIIp	10,660	3,390	7,270

Notes: Data may not add to totals due to rounding.
Data can be retrieved via ASIST matrix 6128.
r: revised
p: preliminary

TABLE 5

POPULATION GROWTH BY CENSUS YEAR, BY COMPONENT ALBERTA, 1986 TO 1988

	1986-87	1987-88
POPULATION 1986 CENSUS	2,375,300	
COMPONENTS OF GROWTH		
Migration		
Interprovincial		
In-migration	63,290	64,790
Out-migration	92,200	82,620
Net migration	-28,910	-17,830
International		
Immigration	10,230	12,540
Emigration	5,770	5,330
Net migration	4,460	7,210
Total Net Migration	-24,450	-10,620
Births	42,820	41,560
Deaths	13,410	13,730
Natural Increase	29,410	27,830
ANNUAL GROWTH	4,960	17,210
POPULATION (June 1)	2,380,260	2,397,600

Note: Data may not add to totals due to rounding.

TABLE 6
POPULATION BY AGE AND SEX
ALBERTA, 1987 AND 1988

	JUNE 1, 1987			JUNE 1, 1988		
AGE	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL
0	20,490	19,510	40,000	19,960	19,040	39,000
1	21,620	20,520	42,140	21,260	20,290	41,550
2	21,390	20,390	41,780	21,410	20,280	41,680
3	21,490	20,340	41,830	21,230	20,110	41,340
4	21,010	19,930	40,950	21,340	20,040	41,370
0- 4	105,990	100,700	206,690	105,180	99,760	204,940
5	20,320	19,520	39,840	20,760	19,690	40,450
6	19,740	18,750	38,490	20,120	19,370	39,480
7	19,070	18,230	37,300	19,580	18,610	38,190
8	18,680	17,690	36,360	19,010	18,120	37,130
9	18,460	17,240	35,700	18,550	17,570	36,120
5- 9	96,270	91,430	187,700	98,010	93,360	191,370
10	18,260	17,340	35,600	18,340	17,110	35,450
11	18,130	17,210	35,340	18,170	17,260	35,430
12	17,660	16,810	34,470	18,070	17,120	35,190
13	17,170	16,430	33,600	17,560	16,740	34,300
14	17,650	16,700	34,360	17,100	16,420	33,520
10-14	88,870	84,490	173,360	89,240	84,660	173,890
15	18,130	16,860	34,990	17,640	16,660	34,300
16	18,980	17,820	36,800	18,060	16,830	34,900
17	18,710	17,980	36,700	19,030	17,960	36,990
18	18,250	17,880	36,130	18,920	18,400	37,320
19	18,990	18,610	37,610	18,720	18,480	37,200
15-19	93,060	89,160	182,220	92,360	88,330	180,690
20	19,600	19,570	39,160	19,300	19,060	38,360
21	18,590	19,380	37,970	19,040	19,210	38,250
22	20,860	21,680	42,540	19,490	19,750	39,230
23	22,610	23,180	45,790	21,290	21,670	42,960
24	23,640	24,590	48,240	22,900	23,100	46,010
20-24	105,300	108,400	213,700	102,020	102,790	204,810
25	24,010	24,700	48,710	23,510	24,220	47,730
26	25,050	25,150	50,200	23,970	24,380	48,350
27	25,790	25,270	51,060	24,930	24,850	49,780
28	25,610	25,050	50,660	25,500	24,850	50,350
29	25,930	24,680	50,610	25,320	24,720	50,050
25-29	126,390	124,860	251,250	123,240	123,030	246,260

SEE NOTES AT END OF TABLE.

TABLE 6 (CONTINUED)

	JUNE 1, 1987			JUNE 1, 1988		
AGE	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL
30	25,490	24,160	49,640	25,570	24,350	49,920
31	25,030	23,860	48,900	25,240	23,870	49,120
32	24,830	23,010	47,830	24,710	23,580	48,290
33	23,420	22,090	45,510	24,500	22,730	47,230
34	22,190	20,980	43,180	23,160	21,830	44,990
30-34	120,960	114,100	235,060	123,170	116,370	239,540
35	20,750	19,430	40,180	21,850	20,740	42,580
36	19,840	18,960	38,800	20,490	19,220	39,710
37	19,480	18,260	37,740	19,560	18,790	38,350
38	18,560	17,710	36,270	19,240	18,060	37,300
39	18,560	18,050	36,610	18,300	17,550	35,850
35-39	97,200	92,410	189,600	99,440	94,360	193,800
40	18,440	17,900	36,340	18,310	17,880	36,200
41	15,050	14,600	29,650	18,190	17,700	35,890
42	14,540	13,920	28,460	14,880	14,450	29,330
43	14,270	13,470	27,740	14,430	13,790	28,220
44	13,700	13,250	26,950	14,100	13,330	27,430
40-44	76,000	73,140	149,140	79,920	77,160	157,070
45	12,630	12,000	24,630	13,560	13,150	26,710
46	12,170	11,640	23,810	12,460	11,900	24,360
47	11,690	11,040	22,740	12,080	11,600	23,680
48	11,090	10,680	21,770	11,550	10,920	22,470
49	10,780	10,290	21,060	11,000	10,630	21,630
45-49	58,360	55,650	114,000	60,640	58,200	118,840
50	10,470	10,090	20,560	10,690	10,190	20,880
51	10,590	10,200	20,790	10,360	10,010	20,370
52	10,410	9,810	20,220	10,500	10,110	20,620
53	10,210	9,490	19,700	10,310	9,720	20,030
54	10,350	9,640	20,000	10,120	9,410	19,530
50-54	52,030	49,240	101,270	51,990	49,450	101,430
55	10,110	9,400	19,510	10,200	9,570	19,770
56	10,070	9,420	19,490	9,970	9,300	19,260
57	9,980	9,480	19,450	9,920	9,350	19,270
58	9,340	8,860	18,190	9,810	9,380	19,190
59	9,040	8,780	17,810	9,190	8,780	17,970
55-59	48,530	45,930	94,460	49,080	46,370	95,450

SEE NOTES AT END OF TABLE.

TABLE 6 (CONTINUED)

	JUNE 1, 1987			JUNE 1, 1988		
AGE	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL
60	8,630	8,570	17,200	8,840	8,650	17,490
61	8,330	8,520	16,850	8,460	8,450	16,910
62	7,830	8,200	16,030	8,150	8,380	16,540
63	7,440	8,160	15,600	7,670	8,080	15,750
64	7,300	8,010	15,300	7,380	8,200	15,580
60-64	39,530	41,450	80,980	40,500	41,770	82,270
65	7,180	8,140	15,320	7,100	7,870	14,970
66	6,910	7,470	14,380	7,040	8,090	15,130
67	6,530	7,560	14,100	6,790	7,430	14,210
68	5,530	6,560	12,090	6,380	7,480	13,860
69	5,360	6,230	11,590	5,400	6,450	11,850
65-69	31,510	35,970	67,480	32,700	37,330	70,030
70	5,170	6,170	11,340	5,240	6,140	11,380
71	5,030	6,000	11,030	4,990	6,090	11,080
72	4,950	5,970	10,920	4,840	5,910	10,750
73	4,510	5,780	10,290	4,750	5,880	10,630
74	4,110	5,210	9,320	4,330	5,660	9,990
70-74	23,770	29,120	52,890	24,160	29,680	53,840
75	3,740	4,800	8,550	3,910	5,120	9,030
76	3,470	4,450	7,920	3,550	4,690	8,240
77	3,230	4,220	7,450	3,280	4,360	7,640
78	2,990	3,910	6,900	3,050	4,060	7,110
79	2,740	3,720	6,470	2,740	3,750	6,490
75-79	16,170	21,110	37,280	16,540	21,970	38,510
80	2,390	3,440	5,830	2,540	3,590	6,130
81	2,230	3,050	5,280	2,200	3,260	5,460
82	2,030	2,950	4,980	2,050	2,900	4,950
83	1,850	2,570	4,420	1,820	2,800	4,630
84	1,570	2,220	3,780	1,650	2,410	4,060
80-84	10,070	14,220	24,290	10,270	14,960	25,230
85	1,280	1,900	3,180	1,400	2,070	3,470
86	1,120	1,790	2,920	1,140	1,760	2,900
87	900	1,610	2,510	980	1,620	2,590
88	700	1,310	2,010	750	1,450	2,200
89	570	1,100	1,670	600	1,160	1,760
85-89	4,570	7,710	12,280	4,860	8,050	12,910
90+	2,220	4,320	6,540	2,210	4,500	6,710
TOTAL	1,196,780	1,183,420	2,380,200	1,205,520	1,192,080	2,397,600

NOTES: AGE AND SEX DISTRIBUTIONS ARE BASED ON ALBERTA HEALTH CARE REGISTRATIONS.
DATA MAY NOT ADD TO TOTALS DUE TO ROUNDING.
DATA CAN BE RETRIEVED VIA ASIST MATRIX 6141.

APPENDIX

METHODOLOGY

Introduction

Since 1977 the Alberta Bureau of Statistics has prepared quarterly population estimates to provide up-to-date information on Alberta's population. These estimates are derived using information from administrative data files obtained from the following government agencies:

1) birth and death registrations from Vital Statistics Section, Alberta Health;
2) family allowance transfer counts from Income Security Branch, Health and Welfare Canada;
3) immigration statistics from Employment and Immigration Canada;
4) migration adjustment factors and population estimates for other provinces from Demography Division, Statistics Canada; and
5) health care registration data from Alberta Health.

The final estimates are produced using a component method. A description of the basic methodology and the procedures used in estimating each of the population growth components, as well as the age-sex structure is presented in the following sections.

The Component Method

The component method of estimating quarterly population growth employs the population of a previous quarter as a base, and adds the natural increase plus net migration to derive the population estimates for the following quarter. Natural increase is obtained by subtracting deaths from births. Net migration is

obtained by aggregating net interprovincial (in-migration minus out-migration) and net international migration (immigration minus emigration). These are then combined to derive an estimate of population growth.

Natural Increase

Natural increase is calculated as the difference between the number of births and the number of deaths that occurred during a specific quarter. Preliminary estimates on births and deaths are produced using birth and death rates. The average quarterly crude birth rate and the crude death rate of the preceding year are applied to the estimated provincial population at the beginning of the period to derive the estimated number of births and deaths. These estimates are then replaced by actual counts in the next quarterly report when data are available from Vital Statistics Section, Alberta Health. These figures for births and deaths are 98% accurate. At the end of the year, the figures are further revised to include late registrations and out-of-province births and deaths.

Interprovincial Migration

To estimate interprovincial migration, family allowance transfer of accounts are used in conjunction with the latest adjustment factors and child-adult ratios. Since family allowance cheques are mailed to the families monthly, there is incentive for these families to report any change in their address. The time lag in reporting such change is usually very small. Over the years family allowance transfer of accounts data have been an accurate source of the movements of children among the provinces.

The procedures used in estimating interprovincial migration for Alberta are further improved by incorporating additional information from tax records migration data. Net interprovincial migration is derived as the balance of in-migration and out-migration.

Immigration

The estimate of immigration is first produced on a preliminary basis and then revised when immigration statistics become available. Preliminary estimates are derived taking into consideration the expected number of immigrants to be admitted to Canada in a certain year as announced by Employment and Immigration Canada. Based on the historical immigration records a ratio is derived to estimate Alberta's share of the total immigrants coming to Canada.

The final estimate of immigrants coming to Alberta is based on statistics compiled from immigration papers which each immigrant submits to the Canadian authority at the port of entry. The immigration papers contain information on the intended place of destination and the place of origin of the immigrant. Since this information is available monthly, the quarterly estimate of immigrants intending to come to Alberta can be calculated. These revised figures are obtained by the subsequent quarter and thus the current quarterly publication updates the previous preliminary estimates.

Emigration

Emigration estimates are derived from a method developed by Statistics Canada in which an adjustment factor is developed from emigration information retrieved from personal income tax files. This adjustment factor is applied to the number of family allowance accounts which have been transferred out of the country during the quarter to obtain the emigration estimate. An adult-child ratio based on the 1986 Census counts is then applied to estimate the number of adult emigrants. The sum of estimated adult emigrants and child emigrants, as indicated by family allowance data, equals to the total number of estimated emigrants.

Age-Sex Structure

Age and sex distributions for the January 1 and June 1 estimated population are derived by applying the proportionate age and sex distributions as recorded in the Alberta Health Care Insurance Plan (AHCIP) Master Registration File. Although the health care records are subject to certain limitations such as reporting error, time lags and administrative changes, the age and sex distributions of registrants have proven to accurately reflect the most current age-sex structure of the Alberta population.

GLOSSARY

Birth Rate, or Crude Birth Rate - the number of births in a year divided by the total population.

Child Dependency Ratio - the ratio of children under 15 to working-age persons between the ages of 15 and 64.

Death Rate, or Crude Death Rate - the number of deaths in a year divided by the total population.

Emigration - the migration of population out of a country to another country.

Fertility - the contribution of births to population change.

Immigration - the migration of population into a country from another country.

In-migration - the migration of population into a geographical area.

Median Age - the age at which the population is divided into equal halves, such that one half of the population is older than the median age and the other half of the population is younger than the median age.

Migration - a permanent change of residence from one geographical area to another.

Natural Increase - the net contribution of births less deaths to population change.

Net Migration - the difference between in-migration and out-migration for a geographical area.

Old Age Dependency Ratio - the ratio of persons aged 65 years and over to working-age persons between the ages of 15 and 64.

Out-migration - the migration of population out of a geographical area.